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(54) Title: DEVICE FOR JOINING TOGETHER BUILDING BOARDS, SUCH AS FLOOR BOARDS		
(57) Abstract Device for joining together building boards, such as floor boards, edge surface to edge surface. It comprises a groove (2) in the rear side of each board (1), the groove running over the entire length of the board parallel to its jointing edge, and a substantially U-shaped spring device (3), the legs (5) of which are adapted each to engage the groove of one board, and which is prestressed so that, upon said engagement, the boards are tightly clamped together edge surface to edge surface.		

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DEVICE FOR JOINING TOGETHER BUILDING BOARDS, SUCH
AS FLOOR BOARDS

The present invention relates to a device for joining together building boards, such as floor boards.

For tight jointing of building boards, especially wooden floor boards, tongue-and-groove joints and glue
5 are normally used. The laying of such boards is time-consuming because glue application is indispensable if a tight joint is to be achieved and, furthermore, the glued boards, once they are laid, cannot easily be taken up again.

10 The object of the invention is to provide a jointing device allowing simple and convenient laying of boards and also rapid dislodgement and exchange of, for example, a damaged board.

According to the invention, this is achieved by
15 means of a device which is characterised in that it comprises a groove in the rear side of each board to be jointed, the groove running over the entire length of the board parallel to its jointing edge surface, and a substantially U-shaped spring device, the legs
20 of which are adapted each to engage the groove of one board, and which is prestressed so that, upon said engagement, the boards are tightly clamped together edge surface to edge surface.

The invention will be described in more detail
25 below, reference being made to the accompanying drawing, in which Fig. 1 shows partly broken boards from behind, jointed by means of the device according to the invention; Fig. 2 shows the arrangement of Fig. 1 as seen from the side, and Fig. 3 shows a U-shaped spring element.
30

The wooden boards 1 are provided in their bottom side with milled grooves 2 running parallel to and over the entire length of the board edge surface, abutting



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against one another in the assembled board arrangement,
i.e. the floor. The cross section of the grooves 2 pre-
ferably is inclined towards these edges from the rear
side of the boards. The legs of a U-shaped spring band,
5 made of e.g. steel and having a substantially flat web,
engage each with one groove 2 of each board. The spring
is prestressed such that the legs thereof tightly com-
press the boards edge surface to edge surface. In addi-
tion, the board edge surface preferably form a tong-
10 and-groove joint 4.

One leg 5 of the spring 3 preferably is so designed
that its cross section is complementary to the inclined
cross section of the grooves. During laying of the boards,
this leg is first inserted in its groove in one board,
15 and then the other leg, which also is directed inwardly,
is snapped into its groove in the other board. As will
appear especially from Fig. 2, the web of the spring
band is in contact with the rear side of the jointed
boards.

20 Several such spring devices may be arranged in
spaced apart relation along the boards.

It will be evident that the invention allows a
tight jointing of boards while making the joint arrange-
ment invisible on the upper face of the floor.



CLAIMS

1. Device for joining together building boards, such as floor boards, edge surface to edge surface, c h a r a c t e r i s e d in that it comprises a groove (2) in the rear side of each board (1) to be jointed, 5 the groove running over the entire length of the board parallel to its jointing edge surface, and a substantially U-shaped spring device (3), the legs (5) of which are adapted each to engage the groove of one board, and which is prestressed so that, upon said engagement, 10 the boards are tightly clamped together edge surface to edge surface.

2. Device according to claim 1, c h a r a c - t e r i s e d in that the cross section of the groove (2) is inclined towards the said edge surface, and that 15 the spring device (3) is band-shaped and the cross section of one leg (5) is complementary to the cross section of the groove (2).



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Fig.1

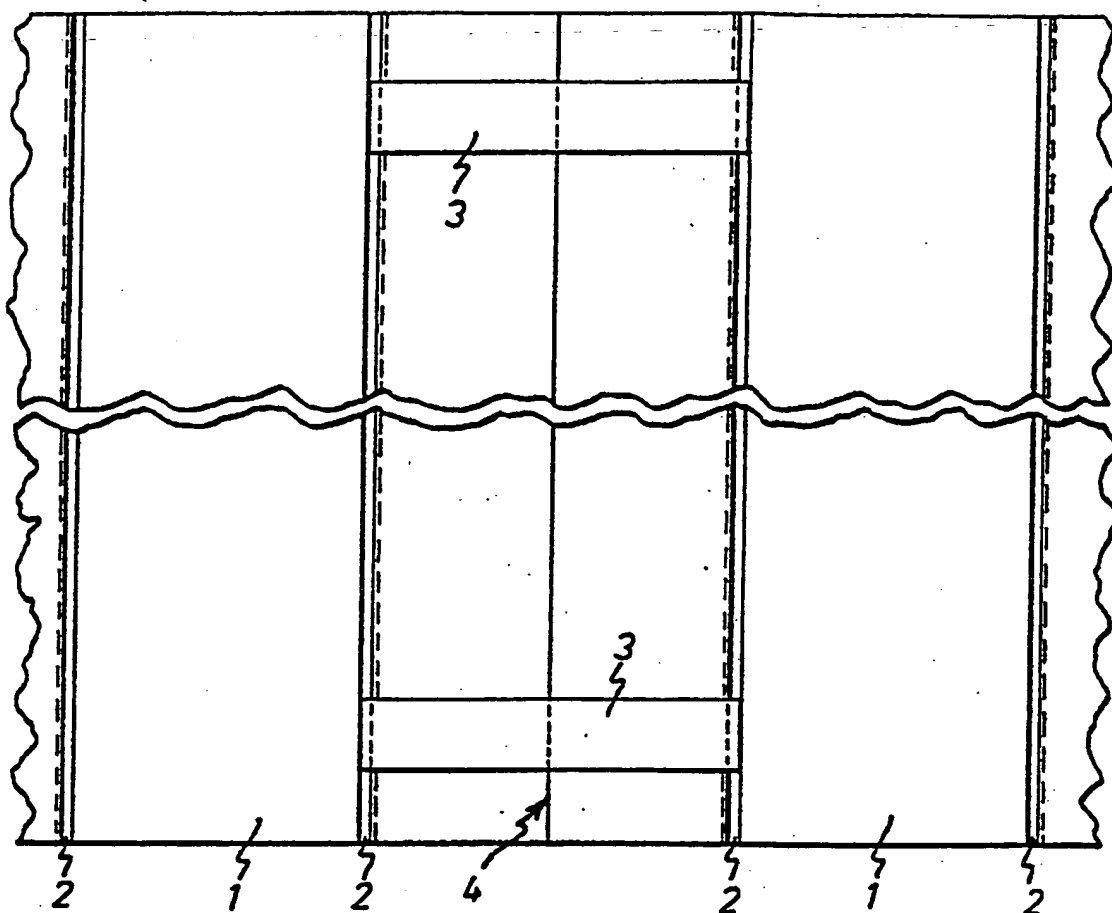


Fig.2

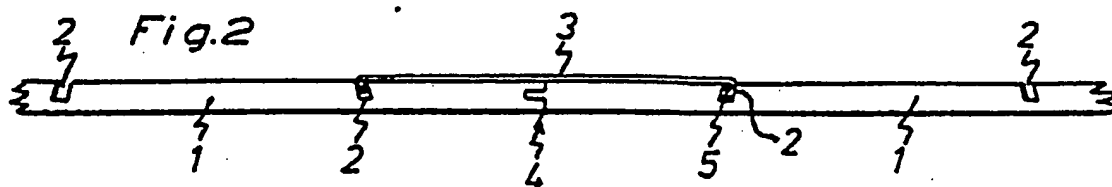
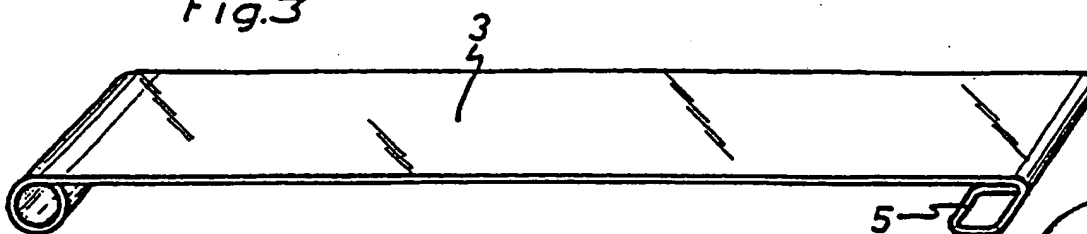


Fig.3



INTERNATIONAL SEARCH REPORT

International Application No PCT/SE83/00423

I. CLASSIFICATION OF SUBJECT MATTER (If several classification symbols apply, indicate all) ¹ According to International Patent Classification (IPC) or to both National Classification and IPC 3 <div style="text-align: center; font-family: monospace;">E 04 F 15/14</div>						
II. FIELDS SEARCHED <div style="text-align: center; font-size: small;">Minimum Documentation Searched ⁴</div> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 25%; text-align: left; font-size: x-small;">Classification System</th> <th style="text-align: left; font-size: x-small;">Classification Symbols</th> </tr> <tr> <td style="padding: 5px;">IPC 3 US C1</td> <td style="padding: 5px;">E 04 F 15/14, E 04 C 2/10-2/14 52: 511, 313</td> </tr> </table> <div style="text-align: center; font-size: x-small; margin-top: 5px;">Documentation Searched other than Minimum Documentation to the extent that such Documents are included in the Fields Searched ⁵</div>			Classification System	Classification Symbols	IPC 3 US C1	E 04 F 15/14, E 04 C 2/10-2/14 52: 511, 313
Classification System	Classification Symbols					
IPC 3 US C1	E 04 F 15/14, E 04 C 2/10-2/14 52: 511, 313					
SE, NO, DK, FI classes as above						
III. DOCUMENTS CONSIDERED TO BE RELEVANT ¹¹						
Category ⁸	Citation of Document, ¹² with indication, where appropriate, of the relevant passages ¹⁷	Relevant to Claim No. ¹⁸				
X	SE, B, 372 051 (RY AB) 23 May 1973	1,2				
Y	FR, B, 2 441 370 (ORENGO GILBERT) 30 October 1978					
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IV. CERTIFICATION						
Date of the Actual Completion of the International Search ¹ <div style="font-family: monospace; font-size: large;">1984-02-16</div>		Date of Mailing of this International Search Report ¹ <div style="font-family: monospace; font-size: large;">1984-03-02</div>				
International Searching Authority ¹ <div style="font-weight: bold; font-size: large;">Swedish Patent Office</div>		Signature of Authorized Officer ¹⁹ <div style="text-align: center;"> Leif Törn </div>				